

## Using a proposed form for the technical observation to evaluate the performance of football referees during matches

Hassan Ibrahim Ali Hassan

sDepartment of theories and applications of team sports, Faculty of Physical Education for male,  
Zagazig University., Egypt  
[Hsn\\_egy@yahoo.com](mailto:Hsn_egy@yahoo.com)

**Abstract:** The current study sheds the light on the evaluation of the technical performance of football referees during the matches. It aims at designing a proposed form for technical observation in order to evaluate the performance of football referees during matches based on different criteria for the objective estimating, and identifying differences between the performances of various referees' degrees according to this form. The descriptive survey method is used. The sample consisted of 11 experts of football professors and expert referees at Egyptian Football Association; in addition, 18 technical observers from various subcommittees at Egyptian Football Association to evaluate the performance of 41 referees during Egyptian football league matches in various divisions, and youth competitions of 2012/2013 season. The average age of the third, second and first degree referees is  $(26.24 \pm 2.18$  years,  $29.35 \pm 2.43$  years, and  $36.81 \pm 4.60$  years), respectively. The proposed form was distributed for observers, after personal interviews with the members of the sub-committees assigned to select referees at Egyptian Football Association to evaluate the performance of football referees during matches. The results of the study indicated that a proposed form used by technical observers was extracted, depending on four criteria to objectively evaluate the technical performance of referees (enforcement the laws by referees, physical fitness, positioning and movement of the referees, contacts among referees, and their control on the game). They also indicated that there were significant differences between the level of performance of football referees in different degrees, (third, second, first), of these criteria. The evaluation of referees performance reached (48.69%, 66.59 %, and 77.80 %), respectively.

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### 1. Introduction

Not only did the evolution of the football competition associate with the evolution of the performance of the players, but also the evolution of the performance of the referees, as a result of the fast and successive developments related to laws of football, which aims at an enjoyment for audience as well as the safety of the players in the framework of fairness among the team during the match. Football referees, therefore, have an extreme interest at the local, continental and international level as a result of the massive evolution of sports competitions in recent times. Football competitions are held in accordance with the laws of a unified understanding and application in all parts of the world. The referee derives his authority by those laws and works truly and fairly on enforcing them between the two contestants in order to cleanly finish the game, devoid of any roughness or errors. Enforced football laws by referees, therefore, contributes to the development of its rivals, which makes the game more fun and interesting.

The referees are an important component in Football League, where football matches require four

referees: The field referee, two assistant referees, and fourth official. The field referee has the main authority in a football game, and is referred to in this study as "referee,". It is very common to see players and coaches arguing with the referee when they do not agree with his decisions. In addition, it is common to see players or club representatives blame the referee for losing the match, and this in turn creates a tension between the referees and clubs [1]. Therefore, the high performance of football referees is such a critical matter that they can manage games with high efficiency, which helps to satisfy all of the players, coaches, and fans. Thus, the poor performance of the referees is one of the greatest threats facing football now. Consequently, the success of the exerted efforts to improve the aspects of the field performance of the ability to evaluate the quality of the performance of the referees is the key of the referees' progress to higher degrees or good appointment for football matches [2]. The subject of refereeing in sport is associated to the often repeated evaluations. The availability of information on those evaluations is, moreover, a general matter with which the official Football Association and the referees themselves are

concerned. The process of referees' evaluation, its relationship with their performance, and their participation in the games through the grades of formal evaluation is, as a matter of fact, carried out by the Football Association [3] [4].

The efficiency of football referees during the current system is measured by three ways: 1) Written tests to evaluate their understanding of the laws of football. Those tests are applied in case of joining the field of refereeing or moving to a higher level of referees degrees, 2) Annually physical fitness tests, including speed tests and running for long-distances, and 3) the evaluation of the level of technical performance through technical reports of games, performed by the qualified observers of Egyptian Football Association.

The evaluation methods of football referees clarified that they cannot be separated from each other, and that the referee cannot run games without successfully pass the written and physical fitness tests that verify a high degree of accuracy of the results when applied to the referees. The evaluation of the performance level of the referees during matches lacks accuracy in the absence of objective indicators or criteria on which the evaluation of referees is done. The observers at Egyptian Football Association depend on subjectiveness in evaluating the performance of the referees during the games through direct observation of the referee during the course of the game, and give him a total score for his performance up to 100 degrees according to the valuation form, used at Football Association, that is free of any indicators for objective evaluation.

Hence, a number of objective criteria should be followed when evaluating referees regarding the character of referee, his appearance, physical fitness, physical movements, the accuracy of his decisions, signals, the extent of enforcing the laws, his ability to control the game, his cooperation with the assistants, and the extent of follow-up the game and the style used in the game [5] [6]. The absence of such objective criteria gives greater opportunity for self-assessment of official observers on the games that referees are in charge. The evaluation of referees is, therefore, subject to the personal whims and influenced by humanitarian orientation and previous experience about the referees during the previous matches. This evaluation is associated with actions and decisions of referees during the situation occurred during the match, which varies from game to another for the same referee at the same situation previously recognized. The evaluation, then, lacks of objectivity due the absence of stable and specific framework of standards on which all the referees can be evaluated during football matches.

Many refereeing errors are, on the other hand, repeated during football matches, which represents a strong indicator of lack of the referees' awareness of the deficiencies in their performance during the games to avoid them, and what positive aspects to confirm and develop in the future. This is also due to the deficiency of direct communication among the official observers of games. Moreover, the technical reports recorded by the observers for performance during the games are not delivered to the referees to identify the deficiencies and proficiencies in their performance during the games.

The reference for many academic studies in recent times which dealt with evaluating the performance of football referees, the evaluation is based on the physical aspects required for the match represented in distance moved by the referee during the match, pulse rate, and how far the referee is where the offence occurred [6]. Football referees can also be evaluated on the basis of the sensitive decision-making accuracy during the game. This can be done by measuring the ability of referee to implement the knowledge tasks of decision-making according to three trends that are the extent of follow-up of referee understanding of match, physical fitness, and decision-making [5]. Thus, the current study sheds light on the evaluation of the performance of football referees according to a number of technical aspects that can be focused on during the performance of referee during matches, and rely on them through official observers report at Egyptian Football Association. The current study, therefore, aims at designing a proposed form for technical observation to evaluate the technical performance of football referees in the Egyptian League matches in various divisions based on different criteria to objectively evaluate, and to identify differences among the performance of various degrees of referees (1:3) According to the proposed form of evaluation.

## 2. Material and Methods

### The Subject

The researcher used, during this study, the descriptive method with comparative survey. The study sample consisted of 11 experts of football professors at the Egyptian universities, refereeing experts at Egyptian Football Association, as well as 18 technical observers from various subcommittees of Egyptian Football Association to evaluate the performance of 41 fundamental referees during football league matches in various divisions and Egyptian youth competitions for the season 2012/2013. It included the referees of third, second, first degree; their numbers were (11, 13, and 17 respectively), and the average of their ages were

(26.24 ±2.18 years, 29.35 ±2.43 years, and 36.81 ±4.60 Years), respectively.

### Design of Proposed Evaluation Form

- The proposed evaluation form includes several steps in order to achieve the objectives of the evaluation of football referees during football matches, which are as follows:
- Determining the primary objective of the proposed form in the evaluation of football referees as an alternative to the form currently used at Egyptian Football Association, neglecting the criteria and indicators on which can be used as a basis. This evaluation form, therefore, loses its objectivity and has non-precision results.
- After reviewing the references and academic studies related to the performance evaluation of football referees [(1) (5) (6) (7) (8)], official websites of the various football Federations were revised to identify the international forms used in evaluating the performance of football referees during matches (FIFA, CAF, the FA, FIGC, New Zealand Football, USSF., Canadian Soccer Association, and FFA) To determine the most important criteria when evaluating football referees during the games.
- Experts are consulted to ensure the validity of such criteria applicable to football referees at Egyptian league with various divisions. They are also taken into account to be good formulated so as not to interfere meanings when evaluating. Those criteria concluded to referees enforcing the law, physical fitness, positioning, movement of the referees, contacts among referees, and control of the game.
- Obvious indicators were developed verifying each of the foregoing criteria, so that they cover specific aspects of the evaluation of each criterion. The proposed amendments were made by experts on these indicators to be included in the proposed form to evaluate 40 indicators distributed (12, 10, 8, and 10), respectively. Estimations are also developed for each indicator (weak, acceptable, good, very good, excellent) corresponding when grading scales of grades (1:5 respectively). The maximum degrees of the proposed form are, therefore, 200 degrees.
- The application has been conducted, to make sure of the validity and reliability of the evaluation form, on 10 observers from outside the study sample and within the study population, through the use of construct validity to find the correlation coefficient between both indicator and the criterion by which represented and between each criterion and the total score of the form. The correlation coefficient is (0.796, 0.864, 0.785, and

0.813), respectively, which indicates that there is a statistically significant correlation at the level 0.05. Reliability coefficient is also 0.891 by using split-half method between total odd and even indicators of the evaluation form.

### Evaluate the Performance of Referees

The proposed form to evaluate the performance of football referees is randomly distributed on some sub-committees of the referees of the Egyptian Football Association. After personal interviews with members of the boards of these committees, the proposed evaluation form has been used by some observers of these committees during the football league with its various divisions and youth competitions of 2012/2013 season, from 02/18/2013 to 04/04/2013, at the end of the first round matches of the first section, and as a result of repeated technical observing of the same referees of the study sample.

### Statistical Analysis

The researcher collects evaluation data of the performance of football referees of third, second and first degree through evaluation forms used by official observers of matches. Those data are then characterized and statistically treated by using Pearson's correlation coefficient to calculate the validity of the evaluation form. Spearman-Brown prediction formula is also used to calculate the reliability of the form. The arithmetic mean and standard deviation for each indicator and standard with the evaluation form are used to evaluate the performance of various degrees of referees; in addition, analysis of One Way ANOVA test is used in order to determine the statistical differences between the different levels of referees by finding the total, the average of squares, and the value of the calculated "F" and compared it with the tabular "F" to determine the significant differences between the indicators and the total score for each evaluation form. Eventually, Fisher's Least Significant Difference (LSD) Test is used to determine the direction of the differences between the various football referees, which is calculated by the equation:

$$\text{Calculate } LSD_{AB} = t_{0.05/2DFW} \sqrt{MSW \left( \frac{1}{n_A} + \frac{1}{n_B} \right)}$$

Where DFW = DF (within) and MSW = MS (within)

### 3. Results and Discussions

**Table (1):** the significance of the differences between the level of performance of various degrees of football referees (third, second and first) in the standard of referees enforcing the law:

indicators	F-value	groups	Mean±SD	the significance of the differences and LSD value		
				third	second	first
1- Making decisions fit the legal offences.	7.658*	third	2.273±0.862	--	0.881*	1.374*
		second	3.154±0.863	<u>0.759</u>	--	0.493
		first	3.647±0.967	<u>0.717</u>	<u>0.683</u>	--
2- Maintaining the safety of the players from injury.	5.658*	third	2.182±0.833	--	0.818*	1.171*
		second	3.00±0.961	<u>0.757</u>	--	0.353
		first	3.353±0.904	<u>0.715</u>	<u>0.680</u>	--
3- Allowing physical friction in a legal framework.	9.399*	third	2.091±0.668	--	0.832*	1.438*
		second	2.923±0.917	<u>0.717</u>	--	0.606
		first	3.529±0.915	<u>0.677</u>	<u>0.645</u>	--
4- Recognizing playing recklessly / violently.	12.695*	third	2.00±0.603	--	0.923*	1.529*
		second	2.923±0.828	<u>0.656</u>	--	0.606*
		first	3.529±0.848	<u>0.620</u>	<u>0.590</u>	--
5- Being aware of unsporting behavior.	15.613*	third	1.909±0.668	--	0.706*	1.738*
		second	2.615±0.923	<u>0.690</u>	--	1.032*
		first	3.647±0.836	<u>0.652</u>	<u>0.621</u>	--
6- Stop / end the game for any violation of the law.	6.664*	third	2.727±0.750	--	0.811*	1.214*
		second	3.538±0.843	<u>0.721</u>	--	0.403
		first	3.941±0.937	<u>0.681</u>	<u>0.648</u>	--
7- Play resumes after a stopover.	5.680*	third	2.636±0.881	--	0.826*	1.246*
		second	3.462±0.929	<u>0.801</u>	--	0.42
		first	3.882±1.022	<u>0.757</u>	<u>0.720</u>	--
8- Maintaining the legal distance of the wall.	19.304*	third	1.818±0.716	--	0.874*	1.888*
		second	2.692±0.821	<u>0.666</u>	--	1.014*
		first	3.706±0.824	<u>0.629</u>	<u>0.599</u>	--
9- Applying the principle of opportunity.	17.817*	third	2.091±0.900	--	0.371	1.791*
		second	2.462±0.843	<u>0.714</u>	--	1.42*
		first	3.882±0.832	<u>0.675</u>	<u>0.642</u>	--
10- committed to the time of the game.	5.531*	third	3.364±0.881	--	0.405	0.93*
		second	3.769±0.799	<u>0.616</u>	--	0.525
		first	4.294±0.570	<u>0.582</u>	<u>0.554</u>	--
11- Overtime is calculated accurately.	11.455*	third	2.545±0.988	--	0.993*	1.573*
		second	3.538±0.929	<u>0.711</u>	--	0.58
		first	4.118±0.676	<u>0.671</u>	<u>0.639</u>	--
12- Recording the events of the game with concern.	18.654*	third	2.00±0.739	--	1.385*	1.941*
		second	3.385±0.836	<u>0.692</u>	--	0.556
		first	3.941±0.872	<u>0.654</u>	<u>0.623</u>	--
- The total score of enforcing the law standard	38.009*	third	27.636±4.357	--	9.826*	17.835*
		second	37.462±5.233	<u>4.432</u>	--	8.009*
		first	45.471±5.852	<u>4.186</u>	<u>3.986</u>	--

(\*) The value of tabular "F" at the significant level 0.05 = 3.25

(\*) Means that there are significant differences at the level of 0.05

(Underline) means the value of LSD calculated between referees' degrees.

Tables (1) indicate that there are no statistically significant differences at the level of 0.05 in the indicators of the evaluation of football referees (third, second, first degree) through the standard of enforcing the law by referees. The calculated value of "F" ranges

between (5.531: 38.009). The Least Significant Difference test LSD was used to determine the direction of the differences between these indicators. The results indicated the direction of the differences were in favor of the referees of first and second degree

compared with third degree referees in all indicators associated with the standard of enforcing the law with the exception of indicator of applying the principle of giving opportunity and commitment to the time of the game, which did not show statistically significant differences between the second and third degree referees. The existence of differences in the majority of indicators is due to the extent of good understanding and enforcing the laws of football through many of the Egyptian league games for football first, second, third degree referees. The enforcement of those laws accurately contributes to avoid emotional factors affecting the decision-making [3]. On the other hand, the decisions of third degree referees are often inaccurate due to the speed of performance during the game, resulting in the speed of decisions made by referees which often require the intervention of the mental operations to realize the variables and conditions of the position of playing, and link them to the laws of football to take the right decision at the right time. However, the lack of experience of third degree referees and delayed in making the appropriate decision, an increase in physical friction and violence occur, leading to the occurrence of injuries among the players because the referee makes the right decisions during short time during the match. The referees are required to keep up with play at all times and ensure that situation are ideally clarified [9] [10]. First and second degree referees have high accuracy to resume play after estimating legal offences, estimate extra time during those repeated stops during the game, and what also associated with it to maintain a legal distance of the wall in front of kick. Despite there are statistically significant differences between first and second degree referees in this indicator, they demonstrate statistically significant differences with third degree referees. As in the case with the indicators of referee recognition to dangerous play, unsporting behavior, and giving the opportunity, as a result of gaining more experience than others.

On the contrary, the results indicate that there are no statistically significant differences between first and second degree referees in the ability to make the appropriate decisions for legal offences, maintain the safety of the players from injury, allow physical friction in a legal framework, stop and resume playing, calculate the minutes and added to it of extra time and record the events of the game with interest. This is due to the large number of matches second degree referees take part in, which helps on the convergence of the level of performance in those indicators of first degree referees.

Accordingly, the use of the standard of enforcing the law by referees through the proposed form to evaluate the performance of various degrees of

football referees contributed to clarify the differences between them.

Tables (2) indicate that there are no statistically significant differences at the level of 0.05 in some indicators of the evaluation of football referees (third, second, first degree) through the standard of physical fitness and positioning and movements of referees. The calculated value of "F" ranges between (0.113:1.765), in each of movement in suitable speed for playing, owning a high rate of acceleration, and bouncing in different directions. This is due to the convergence of physical fitness level, especially speed and endurance between the various degrees of referees at Egyptian Football Association. All referees are subject to FIFA physical fitness tests as a basic prerequisite for referees to participate in the general league matches or junior competitions at various levels. These tests are conducted at the beginning and during the season to ensure the availability of the required level of physical fitness in order to make good matches satisfying both players and audience. This is consistent with the results of Aoba et al, which indicated that the evaluation of the physical level of football referees is more accurate and objective as a result of the use of FIFA Test. It becomes clear that there is no statistically significant differences in movement speed between different grades of the football referees during football matches by using W-EYES apparatus. the speed of movement of the referees recorded  $2.2 \pm 0.1$  M/s [11]. Catterall c, et al also indicates that there are no statistically significant differences between the distance and the speed of movement of first and second degree referees, while endurance is considered a basic prerequisite to the referees of other least grades [11] [12].

Tables (2) indicate that there are no statistically significant differences at the level of 0.05 in some indicators of the evaluation of football referees through the standard of physical fitness, positioning, and the movements of referees. The calculated value of P ranges between (7.218: 38.181) for favor of first and second degree referees in each of the indicator of effort distribution, diametric movement, the proximity of playing, seeing the assistant referee during playing, understanding the tactics of the game, and good positioning. In spite of increasing age of the first and second degree referees compared with third degree referees, they are the most distribution of the effort during halves. This is due to the experience of first and second degree referees in the positioning and effective movement over the playing field, using the wide diametric method, making them be constantly near the playing and seeing assistant referees clearly. The experience of first and second degree referees will also help them to tactical understand of the game, contributing to economize in the effort and be

constantly near the playing, which enable the referee to make accurate decisions during the game [13]. It is, therefore, recommended that physical performances are associated to the decision-making process starting

from the right place at the right time. The enforcement of the football laws is directly linked to the level of physical fitness of the referees [14].

**Table (2):** the significance of the differences between the level of performance of various degrees of football referees (third, second and first) in the standard of physical fitness, positioning and movements of referees:

indicators	F-value	groups	Mean±SD	the significance of the differences and LSD value		
				third	second	first
1- Moving at an appropriate speed to play.	0.566	third	3.545±1.233	--	0.455	0.279
		second	4.00±0.961	<u>0.877</u>	--	0.176
		first	3.824±0.984	<u>0.828</u>	<u>0.789</u>	--
2- Having a high rate of acceleration.	1.765	third	4.727±0.445	--	0.265	0.551
		second	4.462±0.746	<u>0.641</u>	--	0.286
		first	4.176±0.923	<u>0.605</u>	<u>0.576</u>	--
3- Rebounding quickly in different directions.	0.113	third	3.636±0.881	--	0.056	0.107
		second	3.692±0.991	<u>0.801</u>	--	0.163
		first	3.529±0.977	<u>0.756</u>	<u>0.720</u>	--
4- Distributing the effort at both halftime.	7.218*	third	2.727±0.862	--	1.042*	1.155*
		second	3.769±0.799	<u>0.694</u>	--	0.113
		first	3.882±0.832	<u>0.656</u>	<u>0.624</u>	--
5- Moving in a wide diametric manner.	33.063*	third	2.00±0.739	--	1.231*	2.412*
		second	3.231±0.89	<u>0.645</u>	--	1.181*
		first	4.412±0.691	<u>0.609</u>	<u>0.580</u>	--
6- Be within close distance of the play.	9.911*	third	1.909±0.668	--	1.322*	1.267*
		second	3.231±0.799	<u>0.689</u>	--	0.055
		first	3.176±0.923	<u>0.651</u>	<u>0.619</u>	--
7- Making the play confine between him and the assistant	38.181*	third	1.727±0.617	--	1.888*	2.626*
		second	3.615±1.003	<u>0.655</u>	--	0.738*
		first	4.353±0.681	<u>0.619</u>	<u>0.589</u>	--
8- Clearly understand the tactic of the game.	10.997*	third	2.636±0.771	--	1.056*	1.54*
		second	3.692±0.991	<u>0.713</u>	--	0.484
		first	4.176±0.785	<u>0.673</u>	<u>0.641</u>	--
9- Fluent in positioning while playing.	24.451*	third	1.727±0.75	--	1.658*	2.449*
		second	3.385±1.003	<u>0.759</u>	--	0.791*
		first	4.176±0.923	<u>0.717</u>	<u>0.683</u>	--
10- Fluent in positioning during kicks.	31.643*	third	1.909±0.793	--	1.629*	2.444*
		second	3.538±0.929	<u>0.666</u>	--	0.815*
		first	4.353±0.681	<u>0.629</u>	<u>0.599</u>	--
- The total score of physical fitness, positioning and movements standard	25.231*	third	26.545±4.156	--	10.07*	13.514*
		second	36.615±4.961	<u>4.164</u>	--	3.444
		first	40.059±5.441	<u>3.934</u>	<u>3.745</u>	--

(\*) The value of tabular "F" at the significant level 0.05 = 3.25

(\*) Means that there are significant differences at the level of 0.05

(Underline) means the value of LSD calculated between referees' degrees.

In spite of the superiority of first and second degree referees compared with third degree ones, there are significant differences between first and second degree referees in each of the diametric movement, and seeing the assistant referees, good positioning while playing, and during kicks. This is due to the ability of first degree referees to accurately

follow the diametric method more than second degree referees and good vision of the playing field. So, their positioning become better while playing as a result of optimum utilization of the periods of playing preparations to start an attack from one of the two teams, or good positioning during basic situation during the match. It is recommended to move

diametrically in the field from angle to another, and to avoid to interfere football in order that the referee can get the best view of the game. The diametric movement must be in the opposite direction to the movement of assistant referees [8]. Not only is good positioning during playing, but also through fixed positions is one of the good things for the second degree referees compared with third degree ones. Gone et al. indicates that football referees must have

better positioning at the playing field so that they can enjoy better seeing of the playing positions, and thus a good estimate of the game [15].

Accordingly, the use of the standard of physical fitness, positioning and movements of referees through the proposed form to evaluate the performance of various degrees of football referees contributed to clarify the differences between them.

**Table (3):** the significance of the differences between the level of performance of various degrees of football referees (third, second and first) in the standard of communications among referees.

indicators	F-value	groups	Mean±SD	the significance of the differences and LSD value		
				third	second	first
1- Giving a clearly signal when the offences occurred.	13.952*	third	2.364±0.881	--	1.251*	1.93*
		second	3.615±0.923	<u>0.791</u>	--	0.679
		first	4.294±0.999	<u>0.747</u>	<u>0.717</u>	--
2- Using the whistle in an appropriate manner.	10.432*	third	3.091±0.793	--	0.909*	1.38*
		second	4.00±0.961	<u>0.654</u>	--	0.471
		first	4.471±0.606	<u>0.618</u>	<u>0.589</u>	--
3- Giving opportunity with a clear signal.	25.610*	third	2.545±0.891	--	1.532*	1.984*
		second	4.077±0.73	<u>0.610</u>	--	0.452
		first	4.529±0.606	<u>0.576</u>	<u>0.549</u>	--
4- Having the ability to deal with players objecting the decisions.	11.541*	third	1.818±0.716	--	0.72	1.594*
		second	2.538±0.843	<u>0.729</u>	--	0.874*
		first	3.412±0.974	<u>0.688</u>	<u>0.655</u>	--
5- Having the ability to deal with injured players.	21.109*	third	1.909±0.668	--	1.168*	2.032*
		second	3.077±0.828	<u>0.677</u>	--	0.864*
		first	3.941±0.872	<u>0.639</u>	<u>0.608</u>	--
6- Intervening in critical situations.	15.173*	third	1.545±0.656	--	0.609	1.749*
		second	2.154±0.863	<u>0.716</u>	--	1.14*
		first	3.294±0.956	<u>0.676</u>	<u>0.644</u>	--
7- Reacting with the assistant referees' signals.	5.946*	third	2.818±0.833	--	0.59	1.182*
		second	3.408±0.921	<u>0.747</u>	--	0.592
		first	4.00±0.907	<u>0.705</u>	<u>0.672</u>	--
8- Take the advice of assistant referees.	4.610*	third	3.273±0.75	--	0.419	0.998*
		second	3.692±0.91	<u>0.727</u>	--	0.579
		first	4.271±0.906	<u>0.687</u>	<u>0.654</u>	--
- The total score of communications among referees standard	29.498*	third	19.364±3.394	--	7.197*	12.848*
		second	26.561±4.219	<u>3.622</u>	--	5.651*
		first	32.212±4.895	<u>3.421</u>	<u>3.257</u>	--

(\*) The value of tabular "F" at the significant level 0.05 = 3.25

(\*) Means that there are significant differences at the level of 0.05

(Underline) means the value of LSD calculated between referees' degrees.

Tables (3) indicate that there are no statistically significant differences at the level of 0.05 in the indicators of the evaluation of football referees (third, second, first degree) through the standard of communicating among referees. The calculated value of "F" ranges between (4.610: 29.498). LSD test is used to determine the direction of the differences

between these indicators. The results showed that differences are in favor of first degree referees compared with third degree ones in all indicators of the standard. The researcher attributes that to poor communication of third degree referees with the players, especially the objecting players to decisions made by the referees, as a result of the inaccuracy of

those decisions sometimes or generally lack of technical performance of the referees. The same matter happens with the injured players as the injury may occur as a result of violent playing of opponents, which originally resulted from third degree referees inability to control the game, entrenching the believe of injured players that the referee is the primary factor in the incidence. Third degree referees have deficiency in the clarity of their signals a result of hesitating in decision-making, resulting in the inability of the referees to intervene in critical situations that occur among players during the game. On the other hand, the inability of third degree referees to highly respond to the signals of assistant referees such as first degree referees is due to the concentration of third degree referees on the playing segment with which the ball is confined, and thus their visions are restricted to playing surrounding that does not allow seeing assistant referees and communicate with them. The ability of referee of the rapid perception of the players' movements consecutively or concurrently depends on visual perception, which may be a factor in the referee estimating through various positions [8].

The results indicate that there are significant differences in favor of first degree referees compared with second degree referees in some of the indicators such as dealing with with the objecting players of decisions, the injured players, and intervention in critical situations. This is due to the experience of first degree referees who face many situations during the previous games, enabling them to deal with the players in such situations. On the contrary, the results indicate that there is no statistically significant differences between first and second degree referees in the signals of offences in a clear manner, how to use the whistle in an appropriate manner, the signal for giving the opportunity, responding to the signals of assistant referees, and taking their advice into account. In spite of that, second degree referees are characterized by clear signals, the use of whistle and the ability to deal with injured players in a better way than third degree referees. The results of the differences between second and third degree referees also indicated that there are no significant differences between both of them in cooperation with assistants and objecting players on decisions and intervene in critical situations. It is essential that referee depends on the assistant referees during the proceedings of replacing players, make sure of their personal

equipment before entering the game, and no one of the players leaves the playing field without prior permission from referee, and other things left by the referee to his assistant referees [7].

Accordingly, the use of the standard of communications among referees through the proposed form to evaluate the performance of various degrees of football referees contributed to clarify the differences between them.

Tables (4) indicate that there are no statistically significant differences at the level of 0.05 in the majority of the indicators of the evaluation of football referees (third, second, first degree) through the standard of the referees' control over the game. The calculated value of "F" ranges between (3.807: 31.353). Except the indicator of dealing with the pressure of audience; the calculated value of P is (1.989). LSD test is used to determine the direction of the differences among these indicators. The results indicated that differences are in favor of first degree referees in all indicators of the standard. Second degree referees along with first degree referees are superior when compared with third degree referees in each of the indicators of strict decisions-making, enforcement of decisions respecting, blaming the players publicly in an acceptable manner, and imposing disciplinary sanctions. This is due to previous experience possessed by first and second degree referees, which is directly linked to the number of correct decisions taken during the games [16]. When a situation happens, the referee issues a good and strict decision in accordance with the nature of the position (offense or lack of offense), using his mental abilities and linked them to the laws of football to take the right decision [5]. The capacities of football referees are verified in their control of the game according to the quality of the games they involved in. Because the attendance of the audience is not allowed at all Football League and football competitions this season, according to the terms of the Competitions Committee approved by the Board of Directors of Egyptian Football Association because of the security disturbances within the country, there is no significant difference differences between different degrees of referees in the ability to cope with the masses because the referees are not exposed to interact with the masses. Therefore, differences cannot be showed between them through this indicator.



**Table (4):** variance and the significance of the differences between the level of performance of various degrees of football referees (third, second and first) in the standard of referees' control over the game:

indicators	F-value	groups	Mean±SD	the significance of the differences and LSD value		
				third	second	first
1- Having the appropriate appearance.	3.807*	third	3.091±0.996	--	0.678	0.968*
		second	3.769±0.89	<u>0.763</u>	--	0.29
		first	4.059±0.872	<u>0.720</u>	<u>0.686</u>	--
2- Be a self-confident.	10.748*	third	2.091±0.90	--	0.678	1.615*
		second	2.769±0.89	<u>0.770</u>	--	0.937*
		first	3.706±0.956	<u>0.728</u>	<u>0.693</u>	--
3- Starting the game on time.	4.182*	third	3.182±1.113	--	0.51	0.994*
		second	3.692±0.821	<u>0.747</u>	--	0.484
		first	4.176±0.785	<u>0.706</u>	<u>0.672</u>	--
4- Making decisions in a resolute manner.	14.901*	third	2.00±0.853	--	1.231*	1.824*
		second	3.231±0.89	<u>0.724</u>	--	0.593
		first	3.824±0.856	<u>0.684</u>	<u>0.652</u>	--
5- Facing pressure from the players quietly.	11.541*	third	1.818±0.716	--	0.72	1.594*
		second	2.538±0.843	<u>0.729</u>	--	0.874*
		first	3.412±0.974	<u>0.688</u>	<u>0.655</u>	--
6- Facing pressure from the audience quietly.	1.989*	third	1.909±0.668	--	0.483	0.629
		second	2.392±0.746	<u>0.693</u>	--	0.146
		first	2.538±0.967	<u>0.655</u>	<u>0.624</u>	--
7- Imposing respect for his decisions.	10.288*	third	2.273±0.862	--	1.189*	1.609*
		second	3.462±0.843	<u>0.776</u>	--	0.42
		first	3.882±1.022	<u>0.733</u>	<u>0.698</u>	--
8- Blaming the players publicly in an acceptable manner.	11.775*	third	2.455±0.988	--	1.468*	1.663*
		second	3.923±0.917	<u>0.777</u>	--	0.195
		first	4.118±0.90	<u>0.734</u>	<u>0.699</u>	--
9- Being aware of all various things surrounding him.	7.685*	third	2.734±0.846	--	0.884*	1.418*
		second	3.618±0.927	<u>0.782</u>	--	0.534
		first	4.152±0.992	<u>0.739</u>	<u>0.703</u>	--
10- Imposing disciplinary sanctions (caution / expulsion).	10.916*	third	2.273±1.052	--	0.881*	1.727*
		second	3.154±0.769	<u>0.804</u>	--	0.846*
		first	4.00±1.029	<u>0.760</u>	<u>0.723</u>	--
- The total score of referees' control over the game standard	31.353*	third	23.826±3.766	--	8.722*	14.041*
		second	32.548±4.673	<u>3.834</u>	--	5.319*
		first	37.867±4.964	<u>3.621</u>	<u>3.448</u>	--

(\*) The value of tabular "F" at the significant level 0.05 = 3.25

(\*) Means that there are significant differences at the level of 0.05

(Underline) means the value of LSD calculated between referees' degrees.

There are also no statistically significant differences between first and second degree referees in the decent appearance, starting the game on time, strict decisions-making, and enforcement of decisions respecting, blaming the players publicly in an acceptable manner, and being attention to various things. There are, on the contrary, statistically significant differences between third and second degree referees in decisions-making in a strict manner, enforcement of decisions respecting blaming the players publicly in an acceptable manner, being

attention to various things, and imposing disciplinary sanctions (caution / expulsion) for favor of second division referees. They controlled on the games through taking decisions towards different offences and take disciplinary sanctions [17]. The referee has the discretionary authority to determine the extent of the offences, and the sanction they deserve in the form of caution by yellow card or red card expulsion outside the playing field. The referee is guided by himself when making some of these decisions [18] [19].

Accordingly, using the standard of referees' control over the game through the proposed form to evaluate the performance of various degrees of football referees contributed to clarify the differences between them. Thus, the objectives of the study are completed by the total score of all criteria for evaluating the performance of football referees (referees' enforcement of the law, physical fitness, referees' positioning and movements, contacts among referees, referees' control over the game). Tables (1), (2), (3) and (4) showed total score of each criterion, and thus total differences are clearly appeared between the performance of various degrees of referees (third, second, and first degree) ( $97.37 \pm 15.67$  degree,  $133.19 \pm 19.09$  degree and  $155.61 \pm 21.15$  degrees), respectively.

### Conclusions

In light of the results of the current study, a proposed form used by technical observers belonging to Egyptian Football Association can be extracted to evaluate the performance of football referees during matches, based on four criteria to objectively evaluate the technical performance of the referees (referees' enforcement of the law, physical fitness, referees' positioning and movements, contacts among referees, and referees' control over the game). The results indicated that there is significant differences between the level of performance of first and third degree referees in all indicators of those standards. Some indicators did not indicate that there are significant differences between the performance of second degree referees and both of first and third degree referees. The evaluation of the performance level of football referees in different degrees (third, second, first) was (48.69%, 66.59%, and 77.80%), Respectively. The researcher recommends the necessity to follow the proposed form in all football matches to evaluate the performance level of the referees. He also recommends to present a proposal of another form to evaluate the assistant referees during matches, which is enclosed in the technical observer's report at Egyptian Football Association in order to improve the performance level of the referees and assistant referees.

Corresponding Author:

**Hassan Ibrahim Ali Hassan**

Department of theories and applications of team sports, Faculty of Physical Education for male, Zagazig University., Egypt  
Email: [Hsn\\_egy@yahoo.com](mailto:Hsn_egy@yahoo.com)

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